WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 5.990
Volume 4, Issue 8, 1545-1552. Research Article ISSN 2277– 7105

# SURVEY OF MEDICINAL PLANTS IN THIRUENGOIMALAIHILLS, TIRUCHIRAPPALLI DISTRICT, TAMILNADU, INDIA

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Article Received on
03 June 2015,

Revised on 27 June 2015,
Accepted on 20 July 2015

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## ABSTRACT

A survey was undertaken to highlight the efficiency of some potential medicinal plants occur in Thiruengoimalai hills, Tiruchirappalli district. Intensive field surveys at Thiruengoimalai hills have been carried out to document the promising herbaceous medicinal plants available and an inventory of 44 plants was prepared. 44 medicinal plants collected were spread over 31 families. The present investigation brought out some popular medicinal plants frequently used by the local villagers for minor ailments such as boils, cuts, wounds, diarrhoea, head-ache, jaundice, skin infection and general debility. The present study emphasizes the need to survey the locally available medicinal flora and their conservation and sustenance for future generation.

**KEYWORDS:** Thiruengoimalai hills, medicinal plants, conservation.

## INTRODUCTION

The value of medicinal plants to the mankind is very well proven. It is estimated that 70% to 80% of the people worldwide rely chiefly on traditional health care system and largely on herbal medicines (Shanley et al., 2003). India harbors about 15 percent (3,000 – 3,500) of medicinal plants, out of 20 000 medicinal plants of the world. About 90 percent of these are found growing wild indifferent climatic regions of the country .Scientific investigations of medicinal plants have been initiated in many parts of our country because of their contributions to health care. The tribal and rural people of variousparts of India are highly depending on medicinal plant therapy for meeting their health care needs. This attracted the attention of several botanists and plant scientists who directing vigorous researches towards

the discovery or rediscovery of several medicinal plants along with their medicinal remedies for various diseases. Recently various ethnobotanical studies have been reported to expose the knowledge from the various tribals of Tamil Nadu. Each and every tribal uses certain plants as medicine. Documenting the indigenous knowledge through ethnobotanical studies is important for the conservation of biological resources as well as their sustainable utilization. It is also necessary to collect the information about the knowledge of traditional medicines, preserved in tribal and rural communities' of various parts of India and also Tamil Nadu before it is permanently lost(Ahmed John et al., 2014). Due to the modern technology to use the bio-chemical reaction and using different part of the plant (Ganasan et al., 2004 and Kamba Raj., 2009).But rapid fragmentation of natural habitats is greatly narrowing the distribution of the plant and increasing the risk of losing genetic diversity (Amar jyothi, 2012). As a result the medicinal qualities of these plants remain unknown.The objective of the present study was to conduct an ethanomedicinal survey of medicinal plants used to cure various ailments in and around Thiruengoimalai hills, Tamil Nadu.

## MATERIALS AND METHODS

### Study area

The area under investigation for ethnomedicinal studies falls under Tiruchirappalli district, Tamil Nadu, India. The elevation of the hill is about 342 meter (1178 feet). The Maragathaleswaraswami temple is present at 342 meter above. The annual rainfall is about 85 cm per year. Climatically, the area is of dry tropical type. The summer temperature ranges between 30˚to 42° C and winter between 25˚to 28°C. A river named Noiyal runs behind the hill.

### Data collection

Periodic field survey for ethanobotanical exploration was undertaken during November 2014 to February 2015 in Thiruengoimalai hills and surrounding villages during the surveys personal interviews were conducted with village dwellers and other traditional healers. Each plant materials were assigned with field book number and documented as to family, botanical name, local name (Tamil), parts used and medicinal uses. Plant parts that were identified as having use in ethanobotany were collected and preserved. Plant species collected were identified with the help of flora books (Gamble, 1936; Henry et al., 1987; Matthew, 1983).The identified plant specimens were then confirmed with the herbaria of Botanical survey of India, Southern Circle, and Coimbatore, India.

## RESULTS AND DISCUSSION

Present investigation provides an ethnobotanical data of the medicinal plants used by the people of Thiruengoimalai and nearby villages to cure various ailments. 44 plant species,31 families, The most commonly represented families were Euphorbiaceae, Amaranthaceae and Aclepiadeaceae. They were using these plants to cure diseases like diarrhea, skin problems, body pain, knee problem, cough, cold, fever, asthma, kidney problem, tonic, chronic disorders, several aches, hair growth, stomach problems, ulcer, sore throat, leprosy, opthalmia, typhoid, urinary bladder and rheumatism. From this present study it is clear that the people of Thiruengoimalaiposses knowledge of medicinal plants and has to cure with their knowledge. List of plants and their family, local name parts used and their uses were tabulated (Table 1).

**TABLE 1- Survey Of Medicinal Plants In Thiruengoimalai Hills Tiruchirappalli District.**

| S.No | BINOMIAL | VERNACULAR NAME | FAMILY | PLANT PARTS USED | MEDICINAL USES |
|---|---|---|---|---|---|
| 1. | Achyranthesaspera L. | Nayuruvi | Amaranthaceae | Leaves and seeds | The seed powder is used in the treatment of piles. Paste of leaf is used to treat bites of poisonous Insects, wasp stings and relieves pain in delivery. |
| 2. | Acalyphaindica L. | Kuppaimeni | Euphorbiaceae | Whole plant | Plant paste ground with salt is applied externally to scabies. Leaf juice is given in cough and cold |
| 3. | Aervalanata L. | Sirupoolai | Amaranthaceae | Roots | Roots Root paste is applied on the forehead to cure headache and also used as a diuretic. |
| 4. | AlbizziaamaraBoiv. | Wunja | Mimosaceae | Fruit | The tree yields a gum used against ulcer Fruits aresaid to cure malaria and cough |
| 5. | Allmania longipedunculata Gamb. | Kumuttikkerai | Amaranthaceae | Leaves | Leaves are used as a vegetable which is a rich source of iron. |
| 6. | Alysicarpusrugosus DC. | Suddaykeeray | Fabaceae | Seeds | Seeds are used to treat dropsy, swellings, oedema, gout and generally wound healing. |
| 7. | Aloe vera L.Burm.f. | Katrazhai | Lilliaceae | Whole plants | Used for stomach worm killing, jelly is used for hairCleaner, lice killer, give polishes in sunlight, used as piles problem. |
| 8. | Azadirachtaindica A.Juss. | Vembu | Meliaceae | Bark,leaves, flowers, seed and oil | Bark and leaves are useful in leprosy, skin diseases, eczema, intermittent and malarial fevers, wounds, ulcers and diabetes. |
| 9. | Bidenspilosa L. | Kothimullu | Asteraeceae | Whole plant | It is used in diabetes, menstrual disorders , hepat itis, intestinal worms and for internal and external Inflammations. |
| 10. | Boerhaaviadiffusa Linn. | Mukkarattai | Nyctaginaceae | Whole plant | It is useful in all types of inflammations, leucorr hoea, ophthalmia, scabies,and cardiac disorders, cough, bronchitis and general debility. |
| 11. | BorreriahispidaK.Sch. | Nathaichoori | Rubiaceae | Seeds | Seeds as a confection are cooling and a demulcent and |

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| | | | | | are given in diarrhea and dysentery. |
| 12. | Cassia absus Linn. | Avarum | Caesalpiniaceae | Leaves | Leaf decoction is used as purgative and anathematic. Concentrated leaf decoction is applied to treat Skin diseases. Leaf powder is mixed with honey and given to treat digestive problems. |
| 13. | Cissusquadrangularis Linn. | Pirantai | Vitaceae | Young stem | Young stem is crushed and eaten as appetizer. |
| 14. | *Cleome gynandra*L. | Nallavelai | Capparidaceae | Leaves | Leaf paste is applied twice a day for wound until cure. |
| 15. | Cleome viscosa Linn. | Naivelai, Naikkaduku | Capparidaceae | Whole plant | Powder of leaves is mixed with honey and taken internally as cardiac stimulant, to treat fever and cardiac disorders. The seeds are anthelmintic, carminative, constipating ,diarrhoea, worm infestations and dyspepsia. |
| 16. | Cocciniaindica W&A. | Kovaikai | Cucurbitaceae | Whole plant | Plant extract mixed with milk induces vomiting sensation ,induce sweat glands and urinary secretion |
| 17. | Commelinabenghalensis L. | Aduthinnathalai | Commelinaceae | Leaves | Leaf paste is used as emollient for leprosy and the leaf juice is applied on wounds. |
| 18. | Commelinaclavata Roxb. | Thanneervittan | Commelinaceae | Flower | Water accumulated at the base of the bracts is collected and administered for eye pain. |
| 19. | Corchorustriloculars L. | Perathi, Talakkaippoondu or Pulichan | Tiliaceae | Whole plant | Plant macerated with water yields mucilage and usedas a demulcent. Leaves are used to protect and promote liver function. Root is used to cure syphil is. Seeds are useful in fever and for cleaning bowels. |
| 20. | Cynodondactylon Pers. | Arukampillu | Poaceae | Whole plant | The plant is useful in hyperdipsia, burning sensation of wounds, skin diseases, vomiting, conjunctivitis, abortion and general debility. |
| 21. | Cyperusrotundus | Korai | Cyperaceae | Tubers | The tubers are useful in leprosy, skin diseases,scabies, verminosis, flatulence, dysentery, dismenorrhoea, malarial fevers, vomiting and ophthalmia. |
| 22. | Euphorbia antiquorum L. | Sathurakkalli | Euphorbiaceae | Whole plant | The roots are useful in otalgia, constipation, dyspepsia, wounds and ulcers. The juice is useful for rheumatism, neuropathy, deafness, cough ancutaneous diseases. |

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| 23. | Euphorbia hirta L. | Ammanpacharusi | Euphorbiaceae | Leaves | Leaf Paste along with buttermilk is taken orally for worms, bowel complaints, asthma, cough and gonorrhoea. |
| 24. | Evolvulusalsinoides L. | Vishnukaranti | Convolvulaceae | Whole plant | Tonic prepared from whole plant is and consumed as brain tonic and sedative. |
| 25. | Justicia tranquebariensis L. | Sivanarvembu | Acanthaceae | Leaves | Decoction of leaves is used to cure eye complaints and jaundice . |
| 26. | Kyllinga triceps Rottb. | Vendi | Cyperaceae | Root | Decoction of roots is used to relieve thirst in fever and diabetes and oil boiled with the roots to relieve pain in skin. |
| 27. | Leucasaspera Spr. | Thumbai | Lamiaceae | Whole plant | The plant is useful in epilepsy, hysteria, dyspepsia, colic, intestinal worms, fever arising from teething in children, swellings and diarrhoea. |
| 28. | Martyniaannua L. | Puli – Nagam | Pedaliaceae | Leaves | The leaves are used to treat epilepsy and are applied to cure tuberculosis. The leaf juice is used as a gargle to relieve sore throat. |
| 29. | Mollugonudicaulis Lam. | Parpadagam | Aizoaceae | Whole plant | Extract of the whole plant is used in cloudy vision andwhooping cough. |
| 30. | Mollugopentaphylla L. | Kuttuiray | Aizoaceae | Whole plant | Whole plant used as antiseptic, stomachic, mildlaxative, improve digession and stimulate liver. |
| 31. | Pedalium murex L. | Perunerunci | Pedaliaceae | Seeds and leaves | It is used in renal and vesical calculi, spermatorrhoea, spasmodic affections, amenorrhea, dysmenorrhoea dyspepsia, ulcers, fever and general debility. |
| 32. | Pergulariaextensa N.E.Br. | Velipparuthi | Asclepiadaceae | Whole plant | The juice of leaves is useful in helminthiasis, haemorrhoids and leprosy. The plant extract is useful in uterine and menstrual disorders. |
| 33. | Phyllanthus maderaspatensis L. | Melanelli | Euphorbiaceae | Leaves and seeds | Leaf infusion is given to treat head ache. Seed paste is given as laxative, diuretic and carminative. |
| 34. | Polycarpaeacorymbosa Lam. | Nilasedachi or Pallipoondu | Caryophyllaceae | Flowers and leaves | Leaf paste is given to treat jaundice and hepatic disorders and it is given as an anti-dote for snakebites. Flowers and terminal leaves are used as demulcent and astringent. |
| 35. | RicinuscommunisL. | Aamanakku | Euphorbiaceae | Seeds | Oil is used as culminatory |

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| 36. | Sesamumlaciniatum | kleinEllu | Pedaliaceae | Root | Diaphoretic and alternaria |
| 37. | Solanumtorvum S.W. | Sundai | Solanaceae | Fruits | Furits are used as carminative, diuretic, and vermifuge. |
| 38. | Solanumnigrum L. | Manathakkaali | Solanaceae | Leaves | Leaves are cooked andeatendailytoimprovethevision.Leafdecoctionisgivento drinkonceadayinEmptystomachfor7daystocurestomachulcer. |
| 39. | Tephrosiapurpurea Pers. | Kattukkolinchi | Fabaceae | Whole plant | The roots are useful in inflammations, skin diseases, asthma, bronchitis, chronic fever, anaemia, boils and dysmenorrhoea. The leaves are useful in dyspepsia, pectrol diseases, gonorrhoea and bruises. The seeds are useful in skin diseases and rat poisoning. |
| 40. | Thevitianeriifolia juss | . Ponnarali | Apocynaceae | Leaves | Treatment of cardiac insufficiency and therapeutically used. |
| 41. | Tinosporacordifolia Miers. | Amurutavalli or Cintilikkoti. | Menispermaceae | Stem | Stem is useful in burning sensation, hyperdipsia, helminthiasis, stomachalgia, intermittent fevers, chronic fevers skinleprosy, anaemia, cough, asthma, general debility, gout, vomiting, cardiac debility, |
| 42. | Tridaxprocumbens L. | Vettukayapoondu | Asteraceae | Roots | It possesses anti-bacterial and anti- fungal properties. The root is used in treating head ache. |
| 43. | Wrightiatinctoria R.Br. | Palai | Apocynaceae | Leaves | Leaf paste is applied on affected parts twice a day along with coconut oil and cures leucoderma and is used to treat soriosis. Powder of leaves mixed with hair oil cures dandruff and a remedy for gum pain. |
| 44. | Zizyphusjujuba Mill. | Elanthai | Rhamnaceae | Root | Roots as decoction is given in fever and as powder applied to old wounds. Fruits are pectoral, blood purifier and improve digestion. |

## CONCLUSION

The results of this study will provide information on medicinal plants for possible conservation. Since most of them are herbs, they grow fast and therefore can provide continuous supply of the medicinal products. Present report is a result of exhaustive survey on traditional uses of plants for various ailments and it revealed that there is a wide usage of plants by village people of Thiruengoimalai hills and its surroundings. This study will promote a practical use of botanicals and must be continued focusing on its pharmacological validation. Further detailed exploration and collection of ethnobotanical information, chemical studies and screening for medicinal properties willprovide cost effective and reliable source of medicine for the welfare of humanity.

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